ORIGINAL ARTICLE

Study to Assess the Knowledge Regarding Cardiopulmonary Resuscitation for Staff Nurses at SLG Hospitals, Hyderabad-90

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Abstract

Background: Cardiopulmonary resuscitation (CPR) is an emergency treatment meant to save the life of a person experiencing cardiac arrest. It is evident in persons who are breathing only gasps or are unconscious. It can be tried both inside and outside of a medical facility. The study's goals were to evaluate the staff nurses' degree of knowledge about CPR and the demographic variable.

Materials and methods: There was use of a quantitative descriptive research design. Among the population are staff nurses employed by SLG Hospitals in Hyderabad. Using the convenient sampling technique, 30 samples of staff nurses who met the inclusion criteria were chosen from among them. Nurses with a year of experience at SLG Hospital, who speak Hindi, English, and Telugu, as well as those who are open to taking part in the research were included in the study. Experts validated the tool, and prior authorization was secured to carry out the investigation. Consent was gained with knowledge. The investigator guaranteed privacy. A pilot research was carried out. The questionnaire technique was used to collect the data. A semi-structured questionnaire was used to assess the respondents' knowledge of CPR. Descriptive statistics was used to plan the data analysis.

Findings: The findings showed that staff nurses' knowledge of CPR was divided into three categories: inadequate knowledge (13.3%), somewhat adequate knowledge (76.6%), and adequate knowledge (10%).

Keywords: Cardiopulmonary resuscitation, Knowledge, Staff nurses.

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Introduction

Cardiopulmonary resuscitation (CPR) is a vital competency for healthcare professionals in general and nurses in particular. When used during resuscitation by a qualified and experienced individual, it can literally save a life.[1] Basic and advanced cardiac life support are two levels of CPR. The CPR process consists of a coordinated integration of rescue breathing, chest compression, and maintenance of airway. Evidence from the literature and practice is used to decide priority.[2] In an attempt to pump the blood manually through the heart and establish artificial circulation, chest compressions must be performed at a minimum of 100 times per minute. Additionally, the rescuer can use a device to give a breaths which forces air into the lungs or by exhaling into their mouth. Artificial ventilation is the process of providing ventilation externally.[3]

Defibrillation means an administering of an electric shock to the heart and it is needed to restore the perfusing the heart rhythm. Certain conditions, such as ventricular fibrillation, pulseless electrical activity, ventricular tachycardia, asystole, defibrillation is the only effective management protocol. Cardiopulmonary resuscitation induces a shockable rhythm and it is continued generally until the spontaneous circulation regains for the patient or the patient is declared dead. The patient with no breathing or only gasps breathing and unresponsive are most likely that they are in cardiac arrest.[4] Nursing students must be explained by educators who are well experienced in CPR. The knowledge and practice regarding CPR should be followed in different situations regularly by practicing in teaching labs or simulation labs.[5]

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During cardiac arrest, the life-saving two essential interventions are CPR and electrical defibrillation. Even the lay persons can provide CPR treatment to the cardiac arrest victims by learning the CPR training course offered by the Australian resuscitation council (ARC) and other organizations. In the US and Europe, almost 7,50,000 citizens suffer from cardiac arrest every year and their survival rates are dismal, and almost 75% of the victims do not leave the hospital alive.[6] For many years, nursing programs have included the simulation method of reproducing a clinical scenario in a synthetic environment thereby into the curriculum.[7] Simulation has made intentional practice possible in a controlled setting as an addition to clinical experience. Before performing an operation on a real patient, students can rehearse it. This has unquestionable significance. However, the idea of using high-fidelity simulation in place of genuine clinical experience has recently surfaced due to its enhanced sophistication and realism in the laboratory context.[8]

Need for the Study

According to a recent randomized experimental study in Norway, in prolonged cardiac arrest patients, survival was seemed to be increased significantly when defibrillation was postponed in favor of several minutes of CPR. Not only can timely CPR have a significant impact on the results, but it also seems that the quality of CPR matters a lot.[9]

Additionally, recent research has demonstrated that short chest compressions during real human CPR have a negative effect on results. Consequently, it is imperative that CPR be administered in compliance with published recommendations, which are developed using the most up-to-date information available and revised every five years. Given the significance of effective CPR, it become a surprise that in actual cardiac arrest patients, effectiveness of cardio pulmonary resuscitation has been evaluated recently. First of all, despite its seeming simplicity, CPR is incredibly challenging to execute. This is because humans typically lack the internal timing skills necessary to detect 100 compressions and 8–12 breaths per minute, and weariness frequently impedes doing deeper attempts. Secondly, in a panic situation, CPR procedure can be forgotten quickly, particularly if it has not been done recently. Cardiopulmonary resuscitation is taught as a mandatory procedure in sterile class room setting, but it must be administered in the combustible setting of a seriously unwell person surrounded by nervous spectators. Numerous data points indicate that most patients experiencing cardiac arrest do not receive any CPR until minutes or even hours after the arrest begins.[10]

The American Heart Association (AHA) has created a product called CPR Anytime that allows people to learn CPR on their own in under 30 minutes. These kinds of products could help achieve such lofty training objectives. Also, CPR quality needs to be raised. Cardiopulmonary resuscitation is an essential intervention that can help people who are experiencing sudden cardiac arrest, a situation that is extremely deadly.[11] This intervention can be performed by both laypeople and medical professionals and does not always require specialized equipment. Cardiopulmonary resuscitation must be administered in accordance with the established performance requirements, nevertheless, in order to be effective. Heart arrest treatment is experiencing a period of great excitement right now, as a number of significant new studies have paved the way for the creation of cutting-edge instruments that will help medical professionals save lives.

Objectives of the Study

- To assess the demographic variables.
- To assess the knowledge level regarding cardio pulmonary resuscitation among the staff nurses.

Methodology

A quantitative descriptive research design was used. Population includes staff nurses working in SLG Hospitals, Hyderabad. Among them, 30 participants of the staff nurses fulfill the inclusion criteria. Samples were selected by convenient sampling technique. Nurses with a working experience of 1 year in SLG Hospital and those who can read and write Telugu, English, and Hindi and those who are willing to participate in study were included in the study. Tool was validated by experts and prior permission was obtained to conduct the study. Informed consent was obtained. Investigator assured the confidentiality. Pilot study was conducted. Data collection was done by questionnaire method. Semistructure questionnaire tool was used. Data analysis was planned by using descriptive statistics.

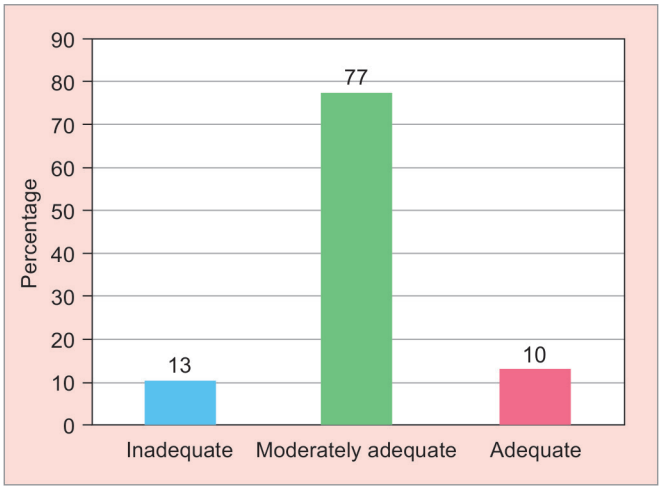

Fig. 1: Level of knowledge among staffs regarding cardiopulmonary resuscitation

Results

According to age, staff nurses who belong to 25–30 years were 2 (6.6%) and 20–23 years were 24 (80%), 23–25 years were 2 (6.6%) and above 30 years were 2 (6.6%), and regarding gender, male 1 (3.3%) and female 29 (96.6%). According to the marital status: married 3 (10%), unmarried 27 (90%). In regards to experience, <6 months were 17 (56.6%), 6 months to 1 year were 13 (43.3%). Staff nurses were BSc: 15 (50%), DGNM: 14 (46.6%), ANM: 1 (3.3%). Hindu: 23 (76.6%), Muslim: 0 (0%), Christian: 7 (23.3%). Based on the knowledge score, 4 (13%) nurses are having inadequate knowledge, 23 (77%) are having moderately adequate knowledge, and 3 (10%) are having adequate knowledge (Fig. 1).

Discussion

Cardiopulmonary resuscitation is an important predictor for survival that too with two persons double the chance of survival rate. Literature shows that survival from cardiac arrest without treatment probably falls 10–15% per minute but the curve shifts to higher survival rate by well-performed cardio pulmonary resuscitation.

Majority of staff nurses (80%) belong to the age group 20–23 years. Majority of staff nurses (96.66%) were in female. The highest number of staff nurses (90%) were unmarried. Majority of the staff nurses (50%) were educated in BSc Nursing, DGNM 14 (46.6%), and ANM 1 (3.3%). Still majority of staff nurses (76.66%) were Hindu. Most of the staff nurses (56.6%) had more than 6 months of experience.

In the present study, data analysis showed that regarding the knowledge about CPR among the staff nurses, 13.3% of the nurses were having inadequate knowledge and 76.6% were having moderately adequate knowledge, and 10% were having adequate knowledge about CPR.

Recommendations

- This study can be replicated and conducted in a large group.
- A similar study can be performed to assess the effectiveness of structure teaching program on the knowledge regarding CPR among staff nurse.

Limitations

- Those who knows English, Telugu, Hindi.
- Staff Nurses, those who are working in SLG Hospitals.

Conclusion

Only 10% of the staff nurses had adequate knowledge regarding CPR. Education about the knowledge of CPR is the important aspect in nursing practice. Nurses should gain more knowledge about CPR and should conduct periodic in-service education regarding hands-on training on CPR.

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